

AMENDMENTS TO THE CLAIMS

1. – 8. (Canceled)

9. (Currently Amended) ~~A layer~~ An article comprising a layer and a substrate, wherein the layer is obtained by thermal treatment ~~from~~ of an aqueous dispersion that has been applied to a substrate, the dispersion containing a silicon/titanium mixed oxide powder prepared by flame hydrolysis and the titanium dioxide content of the powder ranges from 2 to 20 wt.%.

10. (Currently Amended) The ~~layer~~ article as claimed in claim 9, wherein the thickness of the layer ranges from 100 nm to 1 mm.

11. (Currently Amended) The ~~layer~~ article as claimed in claim 9, wherein the thickness of the layer ranges from 1  $\mu\text{m}$  to 50  $\mu\text{m}$ .

12. (Currently Amended) The ~~layer~~ article as claimed in claim 9, wherein the thickness of the layer ranges from 5  $\mu\text{m}$  to 15  $\mu\text{m}$ .

13. (Currently Amended) The ~~layer~~ article as claimed in claim 9, wherein the BET surface area of the powder ranges from 5 to 500  $\text{m}^2/\text{g}$ .

14. – 15. (Canceled)

16. (Currently Amended) The ~~layer~~ article as claimed in claim 9, wherein the substrate is selected from the group consisting of borosilicate glass, silica glass, glass ceramic, and a material with a very low coefficient of expansion.

17. (Currently Amended) The ~~layer~~ article as claimed in claim 9, further comprising less than 0.5 wt.% of impurities.

18. (Withdrawn; Currently Amended) A process for preparing ~~the layer~~ an article as claimed in claim 9, comprising applying a dispersion containing a silicon/titanium mixed

oxide powder to a substrate, and thermal treatment sintering the dispersion applied to the substrate to form a layer.

19. (Withdrawn) The process as claimed in claim 18, further comprising preparing the dispersion by flame hydrolyzing a silicon/titanium mixed oxide powder, wherein the proportion of powder ranges from 0.1 to 60 wt.% in the dispersion.

20. (Withdrawn; Currently Amended) A method comprising coating a material ~~with a layer as claimed in claim 9~~, comprising forming a layer by thermal treating an aqueous dispersion that has been applied to said material, the dispersion containing a silicon/titanium mixed oxide powder prepared by flame hydrolysis and the titanium dioxide content of the powder ranges from 2 to 20 wt.%, and wherein said material is selected from the group consisting of an ultra-low expansion material a photocatalytic material, a self-cleaning mirror, a superhydrophilic constituent, a lens, a container for a gas and a container for a liquid.

21. (Currently Amended) ~~A layer~~ An article comprising a layer and a substrate, wherein the layer is obtained by thermal treatment ~~from~~ of an aqueous dispersion that has been applied to a substrate, the dispersion containing a silicon/titanium mixed oxide powder prepared by flame hydrolysis and wherein said silicon/titanium mixed oxide powder is a mixture of powders comprising at least one powder having a BET surface area of at least 130 m<sup>2</sup>/g and at least one powder having a BET surface area of at most 90 m<sup>2</sup>/g, wherein the ratio by weight of the powders with a lower BET to the powders with a higher BET surface area ranges from 40:60 to 99.5:0.5.

22. (Currently Amended) The ~~layer~~ article as claimed in claim 21, wherein the thickness of the layer ranges from 100 nm to 1 mm.

23. (Currently Amended) The ~~layer~~ article as claimed in claim 21, wherein the thickness of the layer ranges from 1  $\mu\text{m}$  to 50  $\mu\text{m}$ .

24. (Currently Amended) The ~~layer~~ article as claimed in claim 21, wherein the thickness of the layer ranges from 5  $\mu\text{m}$  to 15  $\mu\text{m}$ .

25. (Currently Amended) The ~~layer~~ article as claimed in claim 21, wherein the BET surface area of the powder ranges from 5 to 500  $\text{m}^2/\text{g}$ .

26. (Currently Amended) The ~~layer~~ article as claimed in claim 21, wherein said silicon/titanium mixed oxide powder is a mixture of powders comprising at least one powder having a BET surface area of at least 170  $\text{m}^2/\text{g}$  and at least one powder having a BET surface area of at most 70  $\text{m}^2/\text{g}$ , wherein the ratio by weight of the powders with a lower BET to the powders with a higher BET surface area ranges from 40:60 to 99.5:0.5.

27. (Currently Amended) The ~~layer~~ article as claimed in claim 21, wherein the titanium dioxide content of the powder ranges from 0.1 to 99.9 wt.%.

28. (Currently Amended) The ~~layer~~ article as claimed in claim 21, wherein the titanium dioxide content of the powder ranges from 2 to 20 wt.%.

29. (Currently Amended) The ~~layer~~ article as claimed in claim 21, wherein the substrate is selected from the group consisting of borosilicate glass, silica glass, glass ceramic, and a material with a very low coefficient of expansion.

30. (Currently Amended) The ~~layer~~ article as claimed in claim 21, further comprising less than 0.5 wt.% of impurities.

31. (Withdrawn; Currently Amended) A process for preparing ~~the layer~~ an article as claimed in claim 21, comprising applying a dispersion containing a silicon/titanium mixed oxide powder to a substrate, and thermal treatment sintering the dispersion applied to the substrate to form a layer.

32. (Withdrawn) The process as claimed in claim 31, further comprising preparing the dispersion by flame hydrolyzing a silicon/titanium mixed oxide powder, wherein the proportion of powder ranges from 0.1 to 60 wt.% in the dispersion.

33. (Withdrawn; Currently Amended) A method comprising coating a material ~~with a layer as claimed in claim 21,~~ comprising forming a layer by thermal treating an aqueous dispersion that has been applied to said material, the dispersion containing a silicon/titanium mixed oxide powder prepared by flame hydrolysis and wherein said silicon/titanium mixed oxide powder is a mixture of powders comprising at least one powder having a BET surface area of at least 130 m<sup>2</sup>/g and at least one powder having a BET surface area of at most 90 m<sup>2</sup>/g, wherein the ratio by weight of the powders with a lower BET to the powders with a higher BET surface area ranges from 40:60 to 99.5:0.5 and wherein said material is selected from the group consisting of an ultra-low expansion material a photocatalytic material, a self-cleaning mirror, a superhydrophilic constituent, a lens, a container for a gas and a container for a liquid.

34. (New) The article as claimed in claim 26, wherein the titanium dioxide content of the powder ranges from 2 to 20 wt.%.

SUPPORT FOR THE AMENDMENT

Claims 1-8 were previously canceled.

Claims 14-15 are now canceled.

Claims 9-13, 16-18, 20-31, and 33 have been amended.

Claim 34 has been added.

The amendment of Claims 9-13, 16-18, and 21-31 is supported by the original English translation of the specification (for) and the corresponding previously pending claims. The amendment of Claim 20 is supported by previously pending Claims 9 and 20. The amendment of Claim 33 is supported by previously pending Claims 21 and 33. New Claim 34 is supported by original Claims 1-4 and the original English translation of the specification.

No new matter has been added by these amendments.